

Commodity Briefs

Specialty Crops

Florida Freeze Reducing Supplies Of Fresh Vegetables

Mother Nature delivered the latest in a series of setbacks for growers of Florida winter vegetables, with a devastating freeze the mornings of January 18 and 19. The freeze caused substantial damage to U.S. supplies of tender warm-season winter vegetables (e.g., squash, snap beans, bell peppers, eggplant, and tomatoes). Florida accounts for about one-third of fresh-market supplies of warm-season vegetables during the late-fall to early-spring period. U.S. supplies of cool-season crops (e.g., lettuce, broccoli, and cauliflower) were largely unaffected, since these are produced mainly in California and Arizona.

Few areas of Florida were spared, as below-freezing temperatures occurred as far south as Dade County at the southern tip. Temperatures sank lower and damages were reportedly far more severe in Gulf Coast areas of the state than in eastern areas. The cold temperatures caused some excess fruit drop in low-lying citrus groves, especially in southwest Florida, but not enough to significantly affect the 1996/97 citrus crops (now midway through this season's harvest).

Although Florida winter-season vegetable growers historically face a high risk of freeze damage, this freeze apparently caught many growers by surprise since it was not predicted in weather forecasts. There was little time to implement frost protection strategies like running irrigation systems and spreading plastic covering over fields.

Grower prices for tomatoes and other tender fresh vegetables grown in Florida will be generally up from February through April, spiking as supply gaps develop following the Florida freeze as well as the unusually cold temperatures that struck Mexico's major vegetable area in Sinaloa. Although plants across the border gener-

ally received little damage, bloom drop was prevalent for most tender vegetables. This eventually showed up as reduced volume in mid-February and is leading to further increases in market prices.

Before the winter damage, USDA had forecast a 2- to 3-percent increase in consumer prices for fresh vegetables during January-June 1997 compared with a year earlier. The revised forecast indicates the fresh-vegetable consumer price index (CPI) is likely to increase 6-7 percent during the 6-month period. The rise in the CPI is being moderated by stable prices for a number of fresh vegetables largely unaffected by the freeze, including potatoes, lettuce, onions, celery, broccoli, cauliflower, spinach, and cabbage. The fresh-vegetable CPI accounts for only about 4 percent of the CPI for food, so the impact on the all-food CPI is minimal.

The freeze impact on retail prices for fresh-market vegetables is expected to end by late April, with the largest year-over-year rise expected during February. Changes in retail prices for fresh-market vegetables typically lag changes in grower prices by 1 to 2 months. The year-over-year increase will appear small in March, since prices were very high in March 1996 (following a February freeze in southwestern Florida). If growers replant lost acreage, a supply glut could develop in April and May, forcing grower prices to very low levels.

Tender Vegetables Bear the Brunt

The freeze caused shipping-point prices for most tender warm-season crops in Florida to increase substantially, as fields in the large producing area in the southwest (Ft. Myers/Immokalee) and the Homestead area in Dade County received heavy damage. Losses in Dade County alone were estimated at close to \$100 million for vegetables and tropical fruits. In addition, many vegetables and melons had just been transplanted from greenhouses for early spring-season production in this area and areas to the north. Growers had to repeat the process. The east coast area around Palm Beach was not hit as hard by the cold and reported less damage.

Snap beans and squash reportedly suffered the greatest losses, with all acreage reported destroyed in the southwest areas of the state and 80 percent or more destroyed in Dade County. Dade County accounts for the majority of snap bean production in the state, with Palm Beach County in the east coast area accounting for a smaller percentage. About half of Florida's snap bean production is marketed during the January-March (winter) season.

Florida accounts for about two-thirds of the domestic market volume of fresh snap beans during the winter months, so price impacts from reduced Florida output are substantial. About 40 percent of Florida's combined squash and snap bean output is sold during the winter season, with most of the volume coming from Dade County and the southwestern areas of Florida. However, for squash, the price impact has been less severe since three-quarters of the squash marketed during the winter season is imported (largely from Mexico). The annual farm value of the Florida squash crop is about \$50 million, while the state's fresh-market snap bean crop is valued at about \$64 million.

Peppers also sustained heavy damage. Bell peppers, which have an annual farm value of \$195 million in Florida, suffered a reported 60- to 80-percent loss in both Dade County and the southwestern counties. The southwest area accounts for close to half of the state's bell pepper crop, followed by the east coast area with about a third. Dade County reported a loss of \$1 million in bell peppers and \$12 million in chile peppers. In recent years, 60 to 70 percent of U.S. bell pepper volume has been imported during the winter season, so the impact on pepper prices, as with squash, is less severe than on snap beans.

Fresh-Market Tomatoes Also Hit Hard

About half of Florida's fresh-market tomatoes suffered frost damage, ranging from complete defoliation to loss of blooms on plants. Bloom loss affects the market about a month later, as supplies are delayed while plants produce new blooms and set fruit. Dade County, where vegetable acreage has been under

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Where Are Vegetables Grown in Winter?

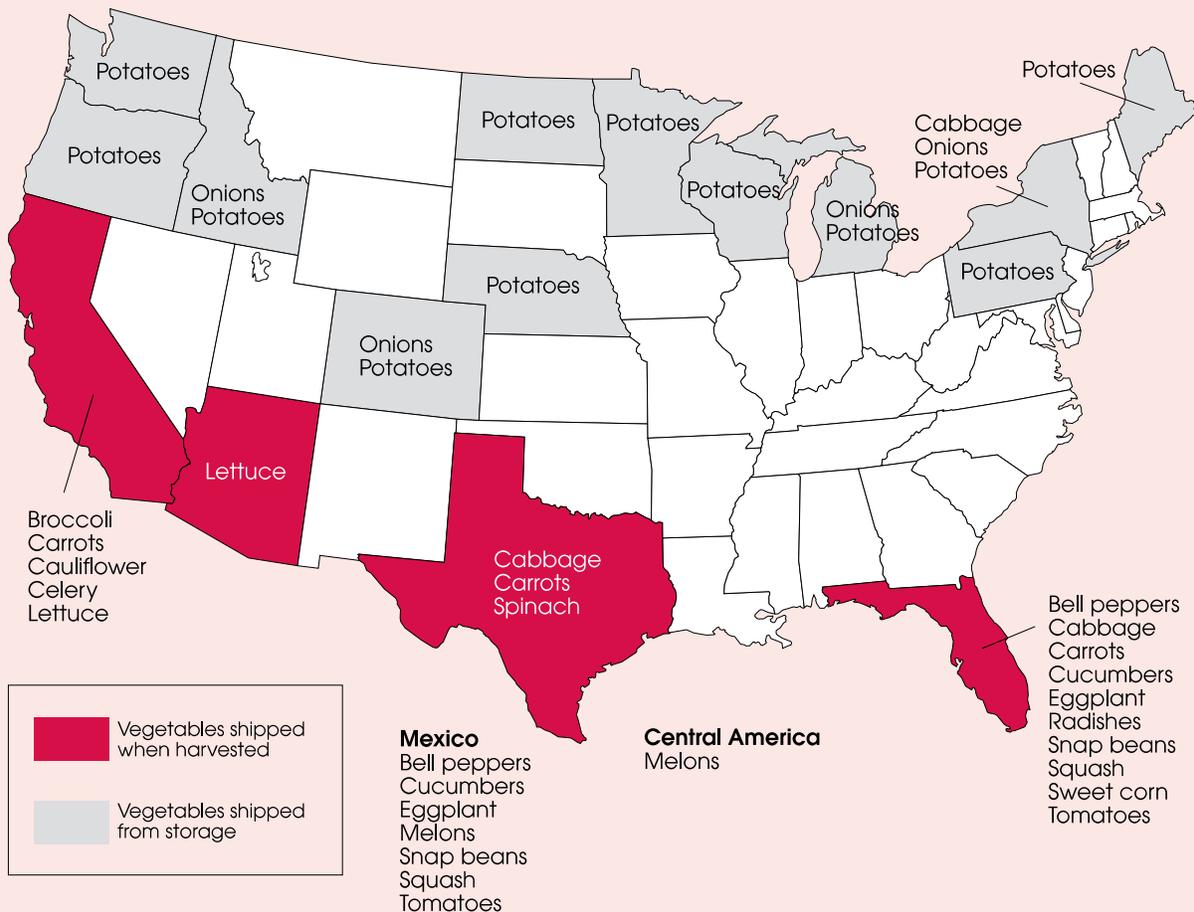
U.S. consumers have come to appreciate—and expect—a wide range of top-quality choices in supermarket produce sections throughout the year. Providing a consistent array of vegetables is sometimes a challenge, especially during the winter. U.S. vegetable suppliers are geographically concentrated during the winter season. The primary sources are California, Mexico, Florida, Arizona, and Texas, with smaller volumes imported from several other countries.

When an event such as a freeze in Florida or a swarm of white flies in California reduces supplies, the alternative sources of supply are fewer than during the summer when most states produce vegetables. As a result, vegetable prices tend to be higher and more variable during the winter months than during any other season. The lack of alternatives is most apparent when there is a problem in California, because imports of the kinds of fruits and vegetables grown in California are generally small. In the case of Florida, Mexico can sometimes help limit price increases by stepping up shipments to the U.S.

Within the U.S., the states of California, Florida, Arizona, and Texas tend to concentrate on commodities that grow best in their respective winter environments. Florida, which tends to be the warmest state during the winter, generally grows tender warm-season crops like tomatoes and peppers. California, Arizona, and Texas grow the cool-season crops (e.g., cabbage, carrots, and spinach). Although the freeze in Florida crippled supplies of tender vegetables like snap beans, squash, and peppers, the supplies of lettuce, broccoli, and cauliflower remain ample since these are produced largely in southern California and Arizona.

During the winter, between one-half and two-thirds of the U.S. supply of tender fresh vegetables is imported, largely from Mexico. Supplies of fresh potatoes and onions are shipped from storage (produced during the fall) from states like Idaho, Colorado, and New York (which also ships cabbage).

Winter Season Vegetable Suppliers to the U.S. Market



pressure from urban growth and where tomato acreage has been in a long-term decline, had about 3,100 acres of tomatoes growing in good condition at the time of the freeze. About 25 percent was being harvested or close to being harvested. An estimated 40 percent of all acreage was damaged.

Southwestern Florida now accounts for almost three-fourths of Florida's tomato acreage during the winter months. Over 13,000 acres of tomatoes were in the ground, with about 8,000 acres being harvested or within 2 weeks of harvest. Damage was severe in this area, as loss estimates exceeded 50 percent. In the Palm Beach area on the east coast, about 2,800 acres of tomatoes were planted, with about a third being harvested at the time of the freeze. Minimal damage was reported in this area.

Although tomato plants may have been severely damaged, a portion of the fruit was salvaged for sale. With this volume on the market, tomato prices initially did not rise as much as might be anticipated following such a severe weather event. However, after the salvage volume moves through the market, a gap exists during the time these vegetables would normally be marketed. Thus, the largest rise in market prices has been delayed until late February or March.

By April, most of the impact from the January freeze will be over as production recovers. By May, other states (California, South Carolina, Georgia) will supplement Florida produce in the market.

The Florida fresh-market tomato crop has an average annual farm value of about \$420 million, with the winter season accounting for roughly one-third. Due to poor weather in Florida and recent changes in tomato trade (AO June 1996), around two-thirds of fresh-market toma-

Why Did Forecasters Miss the Florida Freeze?

When the National Weather Service (NWS) terminated all operational agricultural weather programs in 1996, it saved taxpayers approximately \$2.3 million (annual cost). It accomplished this by discontinuing a national program of agricultural forecasts, eliminating agricultural weather advisories, and curtailing interactions between NWS and several Federal and state agencies. Four NWS agricultural weather centers closed down, four NWS weather service offices were consolidated, all district frost monitoring offices were eliminated, and staff dedicated to agriculture was downsized at four other weather offices.

Despite the downsizing, NWS intended to continue to collect weather observations in agricultural areas. However, a reduction in data was unavoidable—hourly data from agricultural areas, for example, are no longer available. The subsequent data losses have not been recovered by the private sector.

During the Florida freeze, NWS forecasters and private weather forecasters used available information to monitor the situation—observations from urban areas and airports. City and airport-site temperatures are generally higher than rural areas, but this relationship was not taken into account since NWS no longer places an emphasis on specialized service (e.g., agricultural forecasts). In addition, forecasters' reliance on computer-generated guidance cannot capture local temperature effects that are crucial in forecasting regional freezes.

Throughout the night of January 18, the temperatures from city and airport sites in south Florida remained in the mid- to upper 30's. Temperatures in the outlying agricultural areas were significantly lower. By the time NWS forecasters realized the considerable difference and updated the forecasts, it was too late for many growers to respond to the warning.

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atoes are now sourced from Mexico during the winter months (Florida used to command half of the market). A majority of the fresh-market tomatoes now shipped from Florida reportedly go to the food-service industry, with Mexico and other importers now supplying the bulk of the retail markets.

In addition, the small but expanding domestic greenhouse/hydroponic tomato industry is shipping increasing retail volume. Because of a generally cooler climate, California raises only greenhouse

tomatoes during the winter.

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